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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/609,486	07/01/2003	Eric George de Buda	1569-6/MBE	1706

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EXAMINER

NGUYEN, VINCENT Q

ART UNIT PAPER NUMBER

2858

DATE MAILED: 08/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/609,486	Applicant(s) GEORGE DE BUDA, ERIC	
	Examiner Vincent Q Nguyen	Art Unit 2858	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>9/25/03</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claims 1-7, 15-19, are rejected under 35 U.S.C. 102(b) as being anticipated by Gris et al. (5,414,400).

Regarding claims 1, 15, Gris et al. discloses a device comprising (figure 3) a plurality of surface coils (10, 20), at least some of said coils (10, 20) being substantially uniformly spaced around a central cavity (2) for receiving the conductor, and substantially equidistant from said cavity (2), said substantially uniformly spaced coils (10, 20) being oriented substantially axially and radially relative to an axis of said cavity,

at least some of said substantially uniformly spaced coils (10, 20) being electrically interconnected such that output voltages of said coils (10, 20) are combined and applied to output terminals (5, 6) (Figure 1) of said sensor.

Regarding claim 2, Gris et al. discloses at least one of said electrically interconnected surface coils (10, 12) comprises a printed circuit (31).

Regarding claims 3, 16, Gris et al. discloses at least one printed circuit (31) has a first surface (Surface seen in front) and a second surface (Opposite to the front), the first surface being opposite to the second surface, the first surface being provided with at least one surface coil (20).

Regarding claim 4, Gris et al. discloses the second surface is provided with at least one surface coil (Dashed thick lines) (column 3, lines 1-10).

Regarding claims 5, 6, 17, Gris et al. discloses wherein said surface coils on both said surfaces are interconnected (Figure 2, column 3, lines 1-10).

Regarding claim 7, 18, Gris et al. discloses at least one of said surface coils includes a plurality of conductive loops (One radially coil is one loop).

Regarding claim 19, Gris et al. discloses the substrate (1) is substantially rigid (figure 1).

3. Claims 1-7, 12-20, are rejected under 35 U.S.C. 102(e) as being anticipated by Karrer et al. (6,624,624).

Regarding claims 1, 15, Karrer et al. discloses a device comprising (figure 1) a plurality of surface coils (5), at least some of said coils (5) being substantially uniformly spaced around a central cavity for receiving the conductor (1), and substantially

equidistant from said cavity, said substantially uniformly spaced coils (5) being oriented substantially axially and radially relative to an axis of said cavity, at least some of said substantially uniformly spaced coils (5) being electrically interconnected such that output voltages of said coils (5) are combined and applied to output terminals (3, 4) of said sensor.

Regarding claim 2, Karrer et al. discloses at least one of said electrically interconnected surface coils (5) comprises a printed circuit (15) (Figure 3).

Regarding claims 3, 4, 16, Karrer et al. discloses at least one printed circuit (15) has a first surface and a second surface (See figures 7, 12a and 12b), the first surface being opposite to the second surface, the first surface being provided with at least one surface coil.

Regarding claims 5, 6, 12, 17, Karrer et al. discloses wherein said surface coils on both said surfaces are interconnected (Figure 12a-12c).

Regarding claims 7, 18, Karrer et al. discloses at least one of said surface coils includes a plurality of conductive loops (Figures 12a-12d).

Regarding claims 13, 20, Karrer et al. discloses said surface coils (5) are disposed on at least one flexible substrate (Column 9, lines 19-21).

Regarding claim 14, Karrer et al. discloses at least two coils (5) are disposed on a single flexible substrate (15), and wherein said coils (5) are interconnected by at least one interconnection disposed on the same substrate (Figure 7).

Regarding claim 19, Karrer et al. discloses the substrate (15) is substantially rigid.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 8-11, are rejected under 35 U.S.C. 103(a) as being unpatentable over Gris et al. (5,414,400) or Karrer et al. (6,624,624) in view of Fernandes (4,855,671).

Regarding claim 8, Gris et al. or Karrer et al. does not explicitly disclose a housing in which said surface coils are disposed.

Fernandes discloses a measuring device for monitoring the current in the power line and further discloses a housing (figure 3) for the purpose of enhancing the achievement of through self-contained means within each module for communication between modules (Fernandes's column 2, lines 55-61 and column 6, lines 38-40).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate a housing as taught by Fernandes into the system of Gris et al. or Karrer et al. because housing the coils would enhance the portability, the security of the coils to the printed circuit board, and enhance the communication between the modules (Fernandes's column 2, lines 55-61).

Regarding claim 9, except for the housing which has been discussed above, Karrer et al. discloses the device is divided into at least two sections (802, 802') (Figure 13a), such that said sections may be spread apart, to allow entry of said conductor (1) into said cavity.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the housing into the device of Karrer et al. for the same reason as set forth in claim 8.

Regarding claims 10, 11, pertinence to the discussion of claim 8 above, Fernandes discloses at least one hinge for pivotally connecting said sections (Fernades's column 6, line 19).

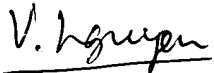
It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the housing into the device of Karrer et al. for the same reason as set forth in claim 8.

Contact Information

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vincent Q Nguyen whose telephone number is (571) 272-2234. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, N. Le can be reached on (571) 272-2233. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


August 1, 2004

Vincent Q Nguyen
Patent Examiner
Art Unit 2858